AMENDMENTS TO THE CLAIMS

1. **(Currently Amended)** A method for treating an ischemic tissue in a subject in need thereof, comprising administering to said subject a therapeutically effective amount of enriched human CD133+/CD34+ endothelial progenitor cells and enriched human mesenchymal stem cells, wherein the CD133+ /CD34+ endothelial progenitor cells and mesenchymal stem cells are enriched from bone marrow mononuclear cells at least two-fold prior to administration to the subject.

2. **(Previously presented)** The method of claim 1, wherein the human CD133+/CD34+ endothelial progenitor cells are human hemangioblast cells.

3. **(Canceled).**

4. **(Original)** The method of claim 1, wherein treatment of the ischemic tissue induces
   (a) formation of blood vessels supplying blood to the ischemic tissue;
   (b) blood flow to the ischemic tissue;
   (c) oxygen supply to the ischemic tissue; or
   (d) a combination thereof.

5. **(Withdrawn-Currently Amended)** A method for treating an ischemic tissue in a subject in need thereof, comprising administering to said subject a therapeutically effective amount of enriched human CD133+/CD34+ endothelial progenitor cells and enriched human mesenchymal stem cells, wherein the CD133+/CD34+ endothelial progenitor cells and mesenchymal stem cells are enriched ~~isolated~~ from umbilical cord blood or from peripheral blood at least two-fold prior to administration to the subject.

6-8. **(Canceled)**

9. **(Withdrawn)** The method of claim 1, wherein the CD133+/CD34+ endothelial progenitor cells are autologous to the subject.

10. **(Previously presented)** The method of claim 1, wherein the CD133+/CD34+ endothelial progenitor cells are allogeneic to the subject.

11. **(Previously presented)** The method of claim 1, wherein the CD133+/CD34+ endothelial progenitor cells are HLA compatible with the subject.

12. **(Currently Amended)** The method of claim 1, wherein the CD133+/CD34+ endothelial progenitor cells are $CD31^+$, $CD146^+$, ~~$CD133^+$, $CD34^+$,~~ VE-$cadherin^+$ or a combination thereof.

13-20. **(Canceled)**

21. **(Previously presented)** The method of claim 1, wherein the human mesenchymal stem cells are autologous to the subject.

22. **(Withdrawn)** The method of claim 1, wherein the human mesenchymal stem cells are allogeneic to the subject.

23. **(Original)** The method of claim 1, wherein the human mesenchymal stem cells are HLA compatible with the subject.

24. **(Previously presented)** The method of claim 1, wherein the therapeutically effective amount of enriched human CD133+/CD34+ endothelial progenitor cells and enriched human

mesenchymal stem cells is a safe amount.

25. **(Previously presented)** The method of claim 1, wherein the therapeutically effective amount of enriched human CD133+/CD34+ endothelial progenitor cells comprises at least 1 x 10^4 human CD133+/CD34+ endothelial progenitor cells.

26. **(Previously presented)** The method of claim 1, wherein the therapeutically effective amount of enriched human CD133+/CD34+ endothelial progenitor cells comprises between 1 x 10^4 to 5 x10^8 human CD133+/CD34+ endothelial progenitor cells.

27. **(Previously presented)** The method of claim 2, wherein the therapeutically effective amount of the hemangioblast cells and the human mesenchymal stem cells is a minimum number of cells necessary for increased blood flow induction to the ischemic tissue.

28. **(Previously presented)** The method of claim 1, wherein the human CD133+/CD34+ endothelial progenitor cells and the human mesenchymal stem cells are administered in a ratio of from about 5:1 to about 1:5.

29. **(Previously presented)** The method of claim 1, comprising administering to the subject a systemic infusion of the human CD133+/CD34+ endothelial progenitor cells.

30. **(Previously presented)** The method of claim 29, wherein the infusion is into bone marrow.

31. **(Previously presented)** The method of claim 1, wherein administering to the subject comprises an intra-arterial infusion of the human CD133+/CD34+ endothelial progenitor cells.

32. **(Previously presented)** The method of claim 1, wherein administering to the subject

comprises an intracardiac infusion of the human CD133+/CD34+ endothelial progenitor cells.

33. **(Previously presented)** The method of claim 1, administering to the subject comprises an intracoronary infusion of the human CD133+/CD34+ endothelial progenitor cells.

34. **(Original)** The method of claim 33, wherein said subject is in need of treatment for chronic myocardial ischemia.

35. **(Original)** The method of claim 1, wherein administering to the subject comprises using an intra-arterial catheter or a stent.

36. **(Previously presented)** The method of claim 1, wherein said subject is in need of treatment for ischemia selected from limb ischemia, ischemic cardiomyopathy, myocardial ischemia, cerebrovascular ischemia, renal ischemia, pulmonary ischemia and intestinal ischemia.

37. **(Withdrawn)** The method of claim 1, wherein the human CD133+/CD34+ endothelial progenitor cells are genetically modified.

38. **(Withdrawn)** The method of claim 37, wherein the human CD133+/CD34+ endothelial progenitor cells are genetically modified to express a recombinant polypeptide.

39. **(Withdrawn)** The method of claim 38, wherein the recombinant polypeptide is VEGF, BFGF, SDF, CXCR-4 or CXCR-5.

40. **(Original)** The method of claim 1, further comprising administering to the subject at least one recombinant polypeptide.

41. **(Original)** The method of the claim 40, wherein the recombinant polypeptide is VEGF, BFGF, SDF, CXCR-4 or CXCR-5.

42. **(Original)** The method of claim 38, wherein the recombinant polypeptide promotes angiogenesis, vasculogenesis, or both.

43. **(Previously presented)** The method of claim 38, wherein the recombinant polypeptide is selected from among a growth factor, a cytokine, a chemokine or a receptor thereof.

44-47. **(Canceled)**

48. **(Withdrawn-Currently Amended)** A method for increasing blood flow to an ischemic myocardium in a subject in need hereof, comprising administering to the subject a therapeutically effective amount of enriched human CD133+/CD34+ endothelial precursor cells and enriched human mesenchymal stem cells, wherein the CD133+/CD34+ endothelial precursor cells and mesenchymal stem cells are enriched ~~isolated~~ from umbilical cord blood at least two-fold prior to administration to the subject.

49. **(Canceled).**

50. **(Previously presented)** The method of claim 48, wherein the human endothelial precursor cells and the human mesenchymal stem cells are administered to the subject by infusion into at least one coronary artery.

51. **(Previously presented)** The method of claim 48, wherein said ischemic myocardium comprises an area of viable myocardium.

52. **(Previously presented)** The method of claim 50, wherein the coronary artery is an epicardial vessel that provides collateral blood flow to said ischemic myocardium in the distribution of a chronic totally occluded vessel.

53. **(Previously presented)** The method of claim 48, wherein the endothelial precursor cells and the mesenchymal stem cells are administered in a ratio from about 5:1 to about 1:5.

54. **(Currently Amended)** A method for improving blood flow to an ischemic myocardium having an area of viable myocardium in a subject in need thereof, comprising administering to said subject a therapeutically effective amount of enriched $CD133^+/CD34^+$ cells and enriched human mesenchymal stem cells isolated from umbilical cord blood, wherein the enriched $CD133^+/CD34^+$ cells are administered by infusion into a coronary artery that is an epicardial vessel that provides collateral flow to said ischemic but viable myocardium in the distribution of a chronic totally occluded vessel, and wherein administering of the $CD133^+/CD34^+$ cells results in improved blood flow to said ischemic myocardium, wherein the-$CD133^+/CD34^+$ cells and mesenchymal stem cells are enriched from umbilical cord blood ~~bone marrow~~ mononuclear cells at least two-fold prior to administration to the subject.

55. **(Canceled)**.

56. **(Original)** The method of claim 54, wherein the human mesenchymal stem cells are isolated from said subject.

57. **(Currently Amended)** A method for inducing the formation of blood vessels in an ischemic tissue in a subject in need thereof, comprising administering to said subject a therapeutically effective amount of enriched human $CD133^+/CD34^+$ hemangioblast cells and enriched human mesenchymal stem cells, wherein the human $CD133^+/CD34^+$ hemangioblast cells and mesenchymal stem cells are enriched from bone marrow mononuclear cells at least

two-fold prior to administration to the subject.

58-61. **(Canceled)**

62. **(Previously presented)** The method of claim 5, wherein the wherein the enriched CD133+/CD34+ endothelial progenitor cells (i) are enriched CD133+ hemangioblasts purified from umbilical cord blood; and (ii) are allogeneic to the subject.

63. **(Previously presented)** The method of claim 62, wherein the enriched CD133+ hemangioblasts and the enriched human mesenchymal stem cells are administered to a subject via intracoronary infusion, and wherein the subject is afflicted with myocardial ischemia.

64. **(Previously presented)** The method of claim 1, comprising administering to the subject from 10^4 to $5x10^8$ mesenchymal stem cells.

65. **(Previously presented)** The method of claim 1, wherein the CD133+/CD34+ endothelial progenitor cells have been enriched from isolated mononuclear cells.

66. **(Previously presented)** The method of claim 65, wherein the CD133+/CD34+ endothelial progenitor cells have been enriched from isolated mononuclear cells by immunoselection.

67. **(Previously presented)** The method of claim 28, wherein the human CD133+/CD34+ endothelial progenitor cells and the human mesenchymal stem cells are administered in a ratio of from about 2:1 to about 1:2.

68. **(Previously presented)** The method of claim 67, wherein the human CD133+/CD34+ endothelial progenitor cells and the human mesenchymal stem cells are administered in a ratio of about 1:1.

69. **(Previously presented)** The method of claim 10, wherein the human mesenchymal stem cells are autologous to the subject.